6VMM

Socket 370 Processor Motherboard

USER'S MANUAL

Socket 370 Processor Motherboard
REV. 1.2 First Edition
R-12-01-001211

How This Manual Is Organized

This manual is divided into the following sections:

1) Revision History	Manual revision information
2) Item Checklist	Product item list
3) Features	Product information & specification
4) Hardware Setup	Instructions on setting up the motherboard
5) Performance & Block Diagram	Product performance & block diagram
6) Suspend to RAM	Instructi ons STR installation
7) @BIOS™ & EasyTune**III**™	@BIOS™ & EasyTune**III**™ introduction
8) BIOS Setup	Instructions on setting up the BIOS software
9) Appendix	General reference

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Revision History

Revision	Revision Note	Date
1.2	Initial release of the 6VMM motherboard user's manual.	Dec.2000

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Item Checklist

☑The 6VMM motherboard

☑Cable for IDE / floppy device

☑Diskettes or CD (TUCD) for motherboard driver & utility

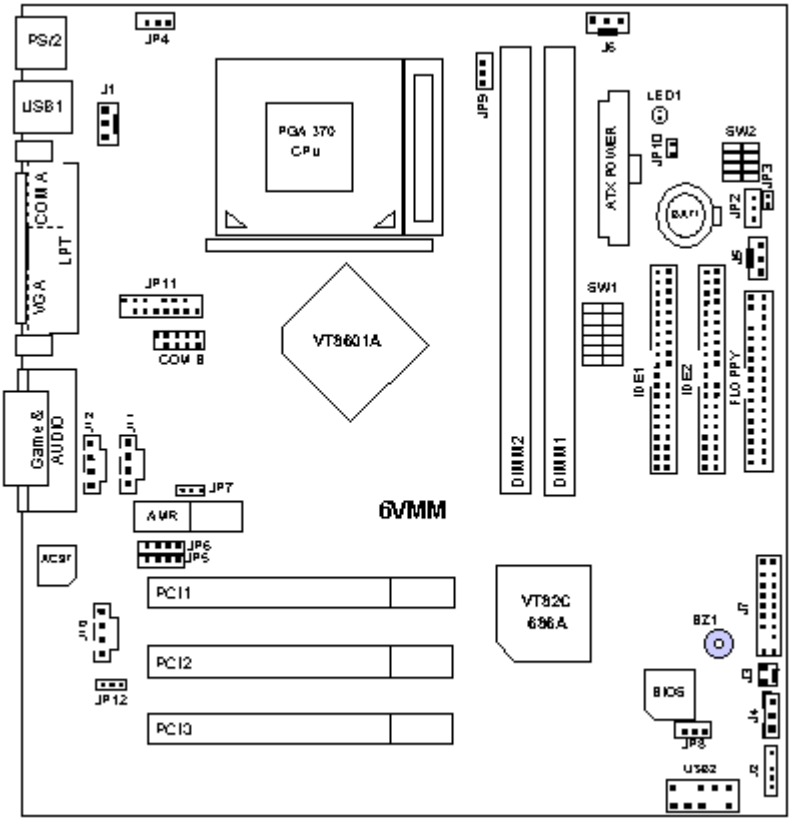
☑6VMM user's manual

Summary Of Features

Form Factor	• 20.6 cm x 24.4 cm Micro ATX size form factor, 4 layers PCB.
CPU	• Socket 370 processor Intel Pentium® *!!!* 100/133MHz FSB, FC-PGA Intel Celeron™ 66MHz FSB, FC-PGA VIA Cyrix® III 100/133MHz FSB, CPGA • 2nd cache in CPU (Depend on CPU)
Chipset	• VT8601A (Pro Media) • VT82C686A
Clock Generator	• ICS 9248DF-39 • 66/100/133 MHz system bus speeds (PCI 33MHz) • 75/83/112/124/140/150 MHz system bus speeds (reserved)
Memory	• 2 168-pin DIMM sockets. • Supports PC-100 / PC-133 SDRAM and VCM SDRAM • Supports up to 1.0GB DRAM • Supports only 3.3V SDRAM DIMM
I/O Control	• VT82C686A
Slots	• 3 PCI slot supports 33MHz & PCI 2.2 compliant • 1 AMR(Audio Modem Riser) slot
On-Board IDE	• 2 IDE bus master (DMA 33/ ATA 66)IDE ports for up to 4 ATAPI devices • Supports PIO mode 3, 4 (UDMA 33/ATA 66) IDE & ATAPI CD-ROM
On-Board Peripherals	• 1 floppy port supports 2 FDD with 360K, 720K,1.2M, 1.44M and 288M bytes • 1 parallel ports supports SPP/EPP/ECP mode • 2 serial ports (COM A & COMB) • 4 USB ports • 1 IrDA connector for IR
Hardware Monitor	• CPU / System fan revolution detect • CPU / System temperature detect • System voltage detect (Vcore,Vcc3,Vcc,+12V)
PS/2 Connector	• PS/2® Keyboard interface and PS/2® Mouse interface
BIOS	• Licensed AMI BIOS, 2M bit flash ROM

On-Board VGA	• Build Trident Blade 3D/Pro Media in VT8601A • Support shared Memory Architecture
Additional Features	• Supports Wake-on-LAN (WOL) • Supports Internal / External modem wake up • Supports USB K/B or Mouse wake up from S3 • Includes 3 fan power connectors. • Poly fuse for keyboard over-current protection • Support STR (Suspend-To-RAM) function • Support @BIOS™ and EasyTuneIII™ (Optional)

6VMM Motherboard Layout



Installation Guide

Getting Started

WARNING!
Computer motherboards and expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

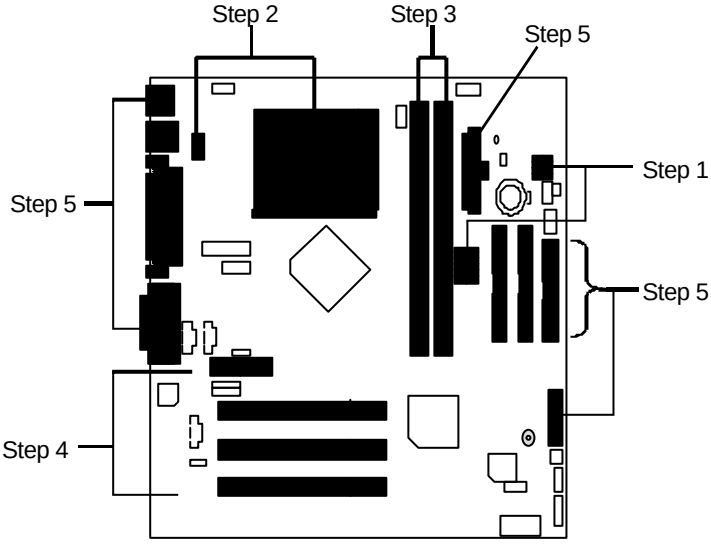
1. Unplug your computer when working on the inside.
2. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case.
3. Hold components by the edges and try not touch the IC chips, leads or connectors, or other components.
4. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.
5. Ensure that the ATX power supply is switched off before you plug in or remove the ATX power connector on the motherboard.

Installing the motherboard to the chassis...

If the motherboard has mounting holes, but they don't line up with the holes on the base and there are no slots to attach the spacers, do not become alarmed you can still attach the spacers to the mounting holes. Just cut the bottom portion of the spacers (the spacer may be a little hard to cut off, so be careful of your hands). In this way you can still attach the motherboard to the base without worrying about short circuits. Sometimes you may need to use the plastic springs to isolate the screw from the motherboard PCB surface, because the circuit wire may be near by the hole. Be careful, don't let the screw contact any printed circuit write or parts on the PCB that are near the fixing hole, otherwise it may damage the board or cause board malfunctioning.

To set up your computer, you must complete the following steps:

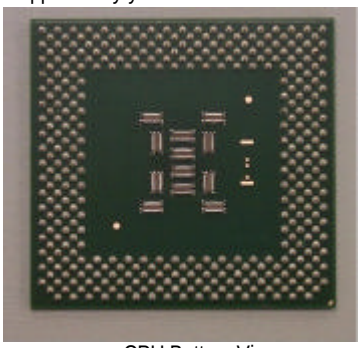
- Step 1 - Set system jumpers
- Step 2- Install the Central Processing Unit (CPU)
- Step 3-Install memory modules
- Step 4-Install expansion cards
- Step 5-Connect ribbon cables, cabinet wires, and power supply
- Step 6-Set up BIOS software
- Step 7-Install supporting software tools



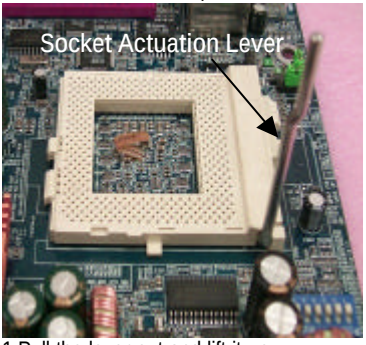
CPU Installation

Please make sure the CPU type and speed is supported by your motherboard.

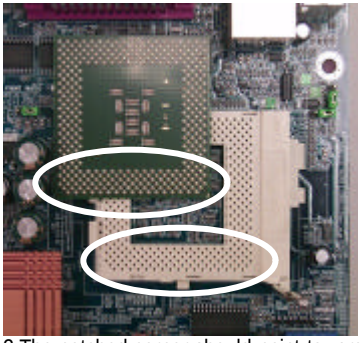
CPU Top View



CPU Bottom View



1.Pull the lever out and lift it up.



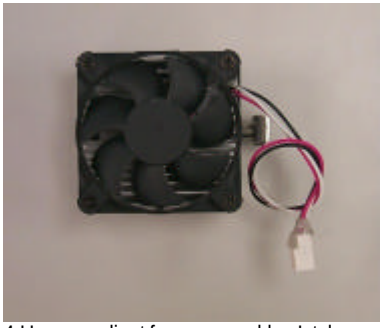
2.The notched corner should point toward the end of the lever. The CPU will only fit in the orientation as shown.

CPU Heat Sink Installation:

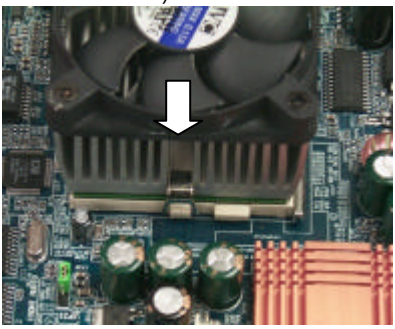
Beware: Please check that the heat sink is in good contact with the CPU before you turn on your system. Poor contact will cause over heat with might cause damage to your processor!

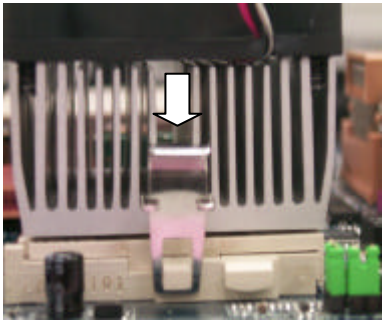
3.Align CPU and insert it

(Please refer to your heatsink installation manual for application of thermal grease to provide better heat conduction between your CPU and heatsink.)



4.Use compliant fan approved by Intel.





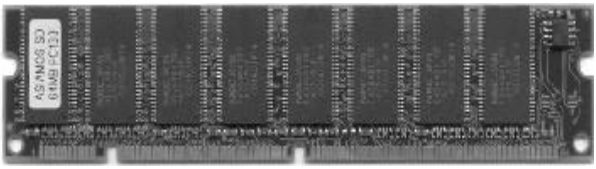
5.Hook one end of the cooler bracket to the CPU socket.

6. Hook the other end of the cooler bracket to the CPU socket.

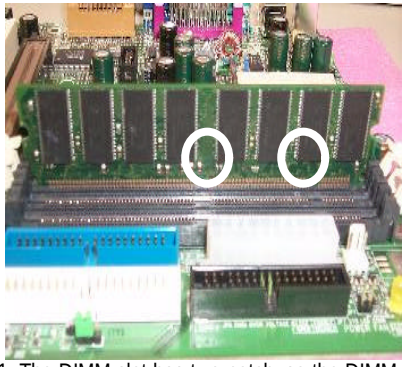
(Please refer to the cooler's installation manual for detailed installation steps)

Memory Installation

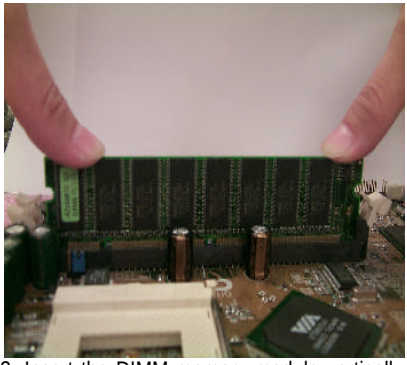
The motherboard has 2 dual inline memory module (DIMM) sockets support 4 banks. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary between sockets.



SDRAM



1. The DIMM slot has two notch, so the DIMM memory module can only fit in one direction.



2. Insert the DIMM memory module vertically into the DIMM slot. Then push it down.

3. Close the plastic clip at both edges of the DIMM slots to lock the DIMM module.

Reverse the installation steps when you wish to remove the DIMM module.

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CPU Speed Setup

The system bus speed is selectable at 66,100,133MHz and Auto. The user can select the system bus speed (SW1) and change the DIP switch (SW2) selection to set up the CPU speed for 300 – 1GB processor.

Set System Bus Speed

SW1: O : ON, X : OFF

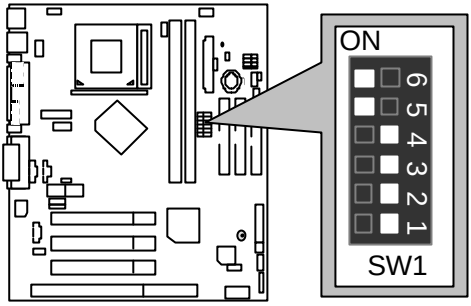
CPU (MHz)	1	2	3	4	5	6	PCI(MHz)
Auto	X	X	X	X	O	O	33.3
66	O	O	X	X	X	X	33.3
75	O	O	O	X	X	X	37.5
83	O	O	X	O	X	X	41.6
100	O	X	X	X	X	X	33.3
112	O	X	O	X	X	X	37.3
124	X	X	X	O	X	X	31
133	X	X	X	X	X	X	33.3
140	X	X	O	O	X	X	35
150	X	X	O	X	X	X	37.5

The CPU speed must match with the frequency ratio. It will cause system hanging up if the frequency ratio is higher than that of CPU.

SW2:

FREQ. RATIO	DIP SWITCH			
	1	2	3	4
X 3	O	X	O	O
X 3.5	X	X	O	O
X 4	O	O	X	O
X 4.5	X	O	X	O
X 5	O	X	X	O
X 5.5	X	X	X	O
X 6	O	O	O	X
X 6.5	X	O	O	X
X 7	O	X	O	X
X 7.5	X	X	O	X
X 8	O	O	X	X
X 8.5	X	O	X	X
X 9	O	X	X	X
X 9.5	X	X	X	X

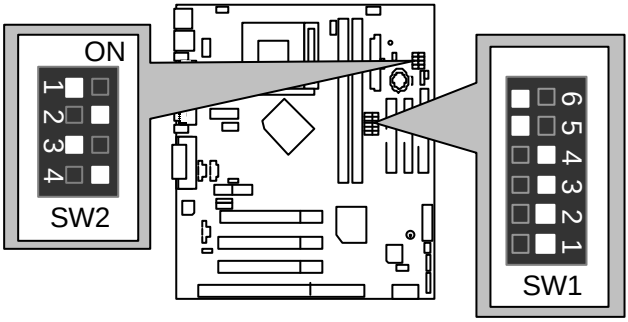
☞For Auto Jumper Setting:



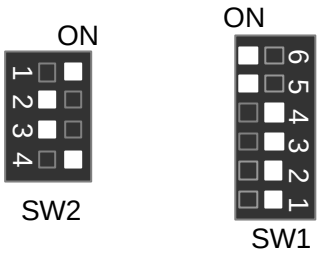
★Note:

1. If you use 66/100/133 MHz CPU, We recommend you to setup your system speed to "Auto" value.
2. We don't recommend you to set up your system speed to 75 , 83 , 112 , 124 , 140 ,150 MHz because these frequencies are not the standard specifications for CPU, Chipset and most of the peripherals. Whether your system can run under 75 , 83 ,112 ,124 ,140 ,150 MHz properly will depend on your hardware configurations: CPU, SDRAM, Cards, etc.

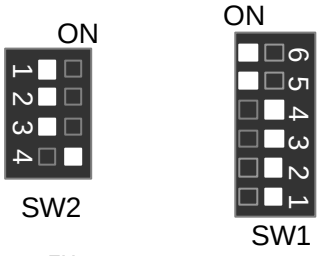
1. Celeron™ 300A/ 66 MHz FSB



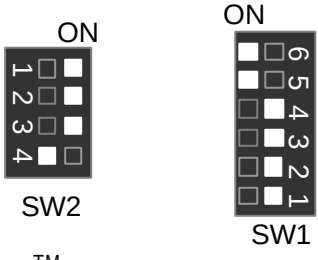
2. Celeron™ 333/ 66 MHz FSB



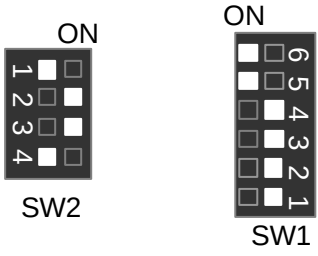
3. Celeron™ 366/ 66 MHz FSB



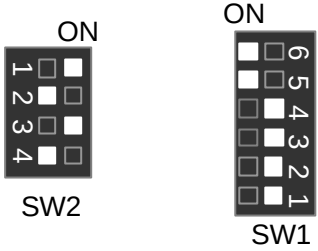
4. Celeron™ 400/ 66 MHz FSB



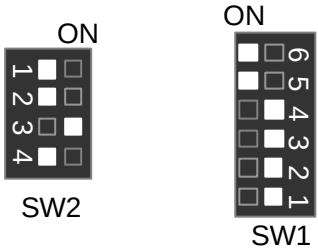
5. Celeron™ 433/ 66 MHz FSB



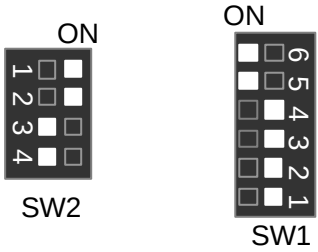
6. Celeron™ 466/ 66 MHz FSB



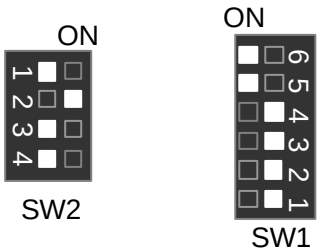
7. Celeron™ 500/ 66 MHz FSB



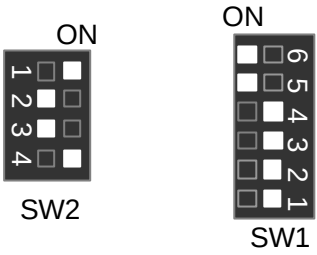
8. Celeron™ 533/ 66 MHz FSB



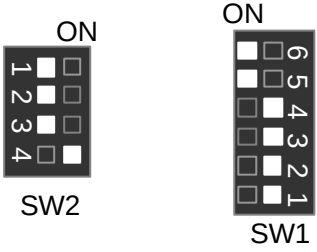
9. Celeron™ 566/ 66 MHz FSB



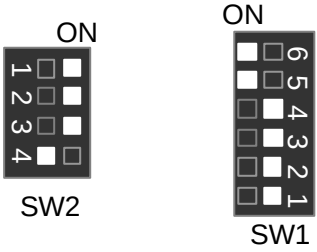
10. Pentium® *!!!* 500/100MHz FSB



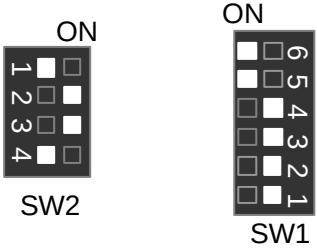
11. Pentium® *!!!* 550/100MHz FSB



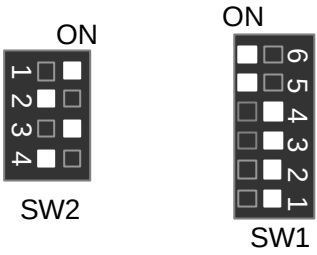
12. Pentium® *!!!* 600/100MHz FSB



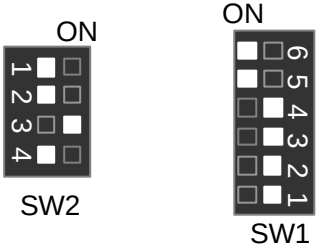
13. Pentium® *!!!* 650/100MHz FSB



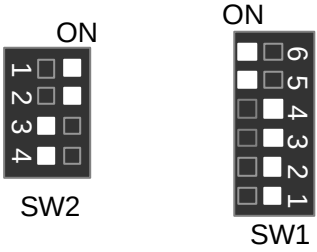
14. Pentium® *!!!* 700/100MHz FSB



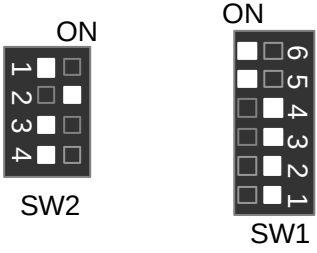
15. Pentium® *!!!* 750/100MHz FSB



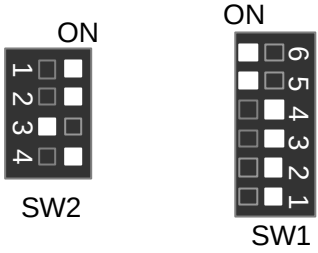
16. Pentium® *!!!* 800/100MHz FSB



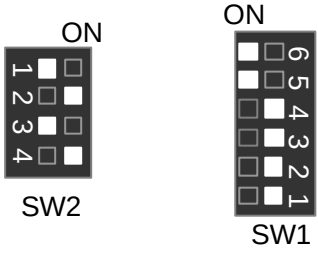
17. Pentium® *!!!* 850/100MHz FSB



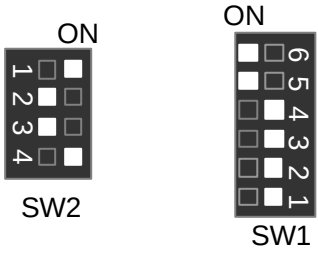
18. Pentium® *!!!* 533/133MHz FSB



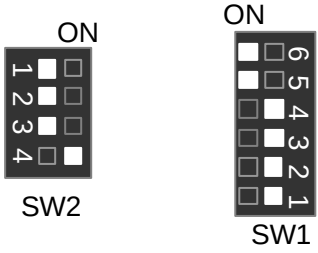
19. Pentium® *!!!* 600/133 MHz FSB



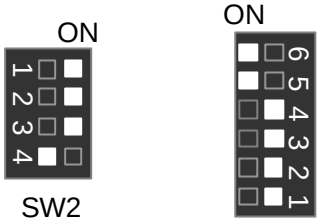
20. Pentium® *!!!* 667/133MHz FSB



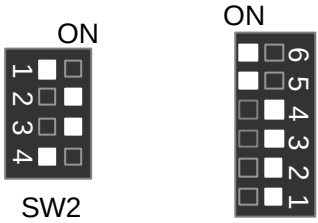
21. Pentium® *!!!* 733/133MHz FSB



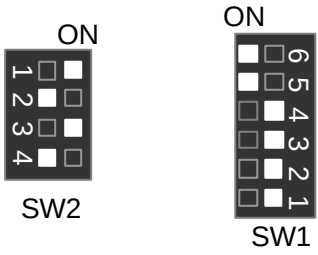
22. Pentium® *!!!* 800/133MHz FSB



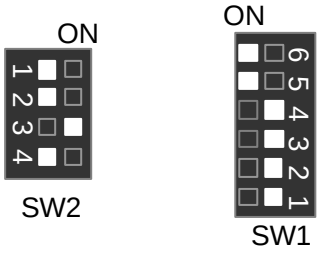
23. Pentium® *!!!* 866/133MHz FSB



24. Pentium® *!!!* 933/133MHz FSB

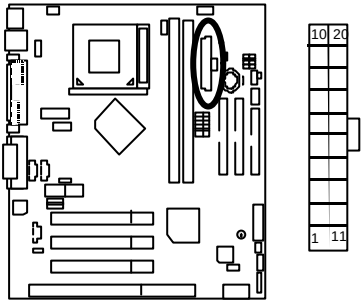


25. Pentium® *!!!* 1G Hz/133MHz FSB



Connectors

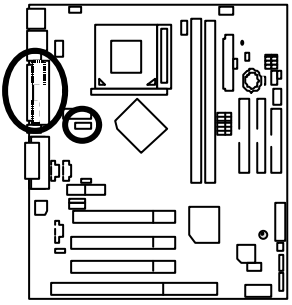
ATX Power

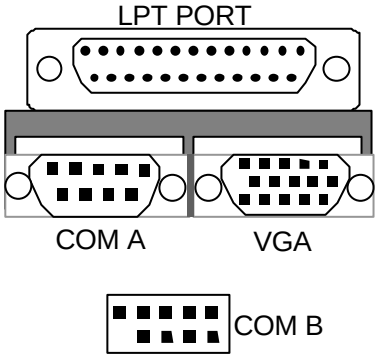


Pin No.	Definition
3,5,7,13, 15-17	GND
1,2,11	3.3V
4,6,19,20	VCC
10	+12V
12	-12V
18	-5V
8	Power Good
9	5V SB stand by+5V
14	PS-ON(Soft On/Off)

Please note:
AC power cord should only be connected to your power supply unit after ATX power cable and other related devices are firmly connected to the mainboard.

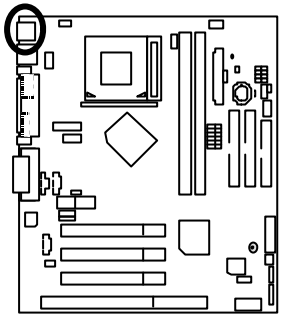
COM A / COM B / VGA / LPT Port

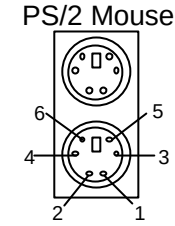




Please note:
This mainboard supports 2 standard COM ports and 1 LPT port. Device like printer can be connected to LPT port ; mouse and modem etc can be connected to COM ports.

CN1:PS/2 Keyboard & PS/2 Mouse Connector

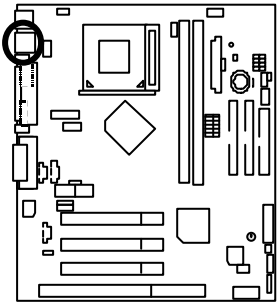


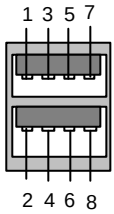


PS/2 Mouse /Keyboard	
Pin No.	Definition
1	Data
2	NC
3	GND
4	VCC(+5V)
5	Clock
6	NC

Please note:
This mainboard supports standard PS/2 keyboard and PS/2 mouse interface connector.

USB1: USB1 Connector

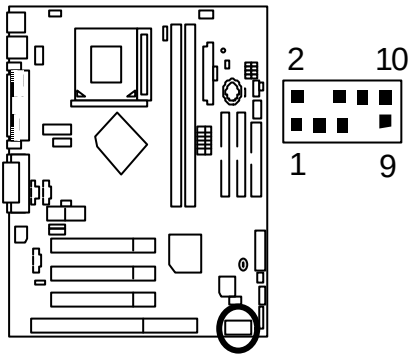




Pin No.	Definition
1	USB PWR
2	USB PWR
3	USB D0-
4	USB DT1-
5	USB D0+
6	USB DT1+
7	GND
8	GND

Please note:
Before you connect your device(s) into USB connector(s), please make sure your device(s) such as USB keyboard, mouse, scanner, zip, buzzer..etc. have a standard USB interface. Also make sure your OS (Win 95 w/ USB supperment, Win98, Windows 2000, Windows ME, Win NT w/ SP 6) supports USB controller. If your OS does not support USB controller, please contact OS venders for possible patch or driver upgrade. For more information please contact your OS or device(s) venders.

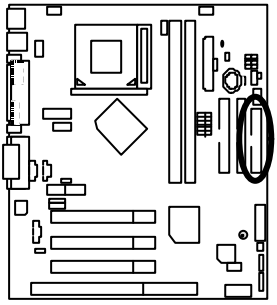
USB2: USB 2 Connector

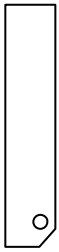


Pin No.	Definition
1	USB PWR
2	GND
3	USB D2-
4	NC
5	USB D2+
6	USB D3+
7	NC
8	USB D3-
9	GND
10	USB PWR

Please Note:
Be careful with the polarity of the front panel USB connector. Check the pin assignment while you connect the front panel USB cable. Please contact your nearest dealer for optional front panel USB cable.

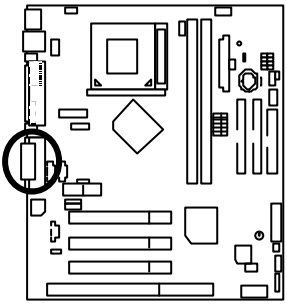
Floppy Port

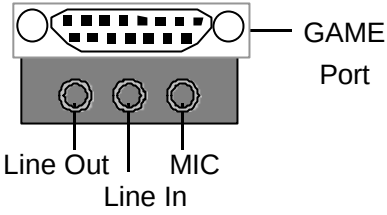




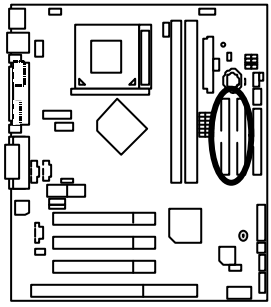
Red Line

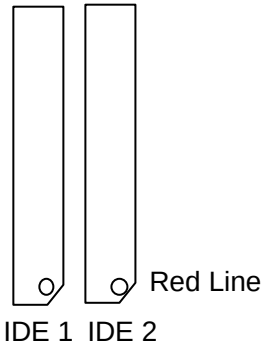
Game & Audio Port



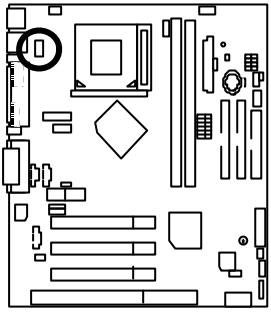


IDE1(Primary), IDE2(Secondary) Port





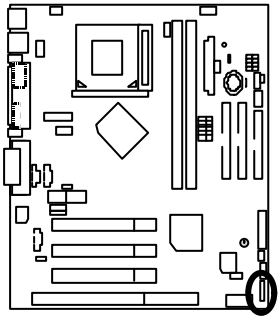
J1: CPU Fan



Pin No.	Definition
1	Control
2	+12V
3	SENSE

Please note:
A proper installation of the CPU cooler is essential to prevent the CPU from running under abnormal condition or damaged by overheating.

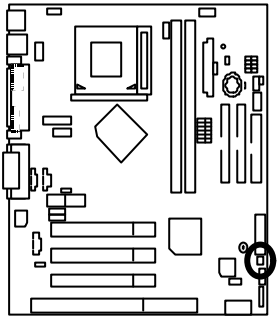
J2:IR



Pin No.	Definition
1	VCC (+5V)
2	NC
3	IR Data Input
4	GND
5	IR Data Output

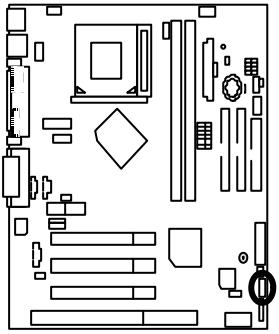
Please note:
Warning make sure the pin 1 on the IR device is align with pin one the connector.

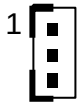
J3:Internal Modem Card Ring On



Pin No.	Definition
1	Signal
2	GND

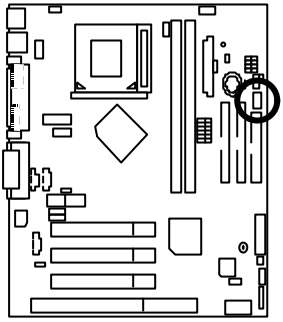
J4: Wake On LAN





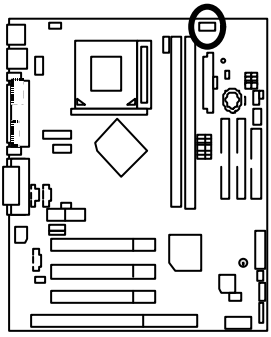
Pin No.	Definition
1	+5V SB
2	GND
3	Signal

J5: System Fan



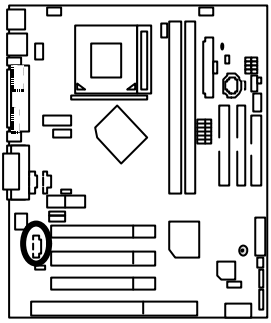
Pin No.	Definition
1	Control
2	+12V
3	SENSE

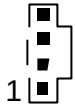
J6: Power Fan



Pin No.	Definition
1	Control
2	+12V
3	NC

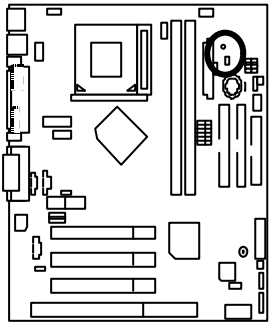
J10: TEL (The connector is for Modem with internal voice connector)





Pin No.	Definition
1	Signal-In
2	GND
3	GND
4	Signal-Out

JP10 / LED1: STR LED Connector & DIMM LED

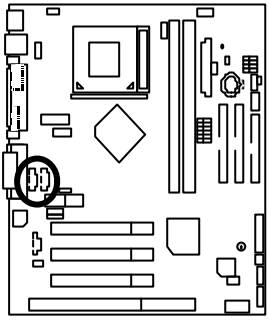


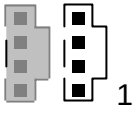
DIMM LED

STR LED Connector External.

Please note:
Do not remove memory modules while DIMM LED is on. It might cause short or other unexpected damages due to the 3.3V stand by voltage. Remove memory modules only when STR function is disabled by jumper and AC Power cord is disconnected.

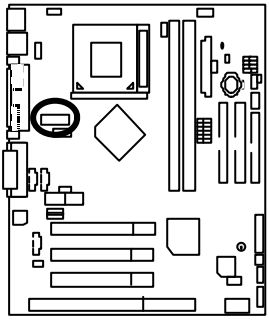
J11:AUX_IN

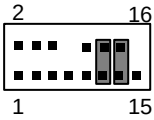




Pin No.	Definition
1	AUX-L
2	GND
3	GND
4	AUX-R

JP11: Front Audio

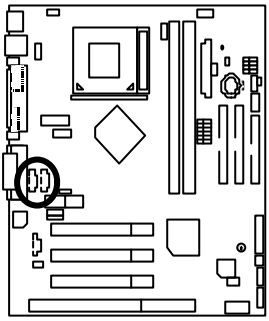


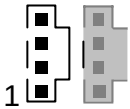


PIN NO.	Definition
1	Incase speaker (R)
2	Incase speaker (L)
3, 4,5,6,10,15	GND
7	+12V
8,16	NC
9	MIC
11	Front Audio (R)
13	Front Audio (L)
12	Rear Audio (R)
14	Rear Audio (L)

Please Note :
If you want to use "Front Audio" connector, you must move 11-12,13-14 Jumper.
In order to utilize the front audio header, your chassis must have front audio connector. Also please make sure the pin assigment on the cable is the same as the pin assigment on the MB header. To find out if the chassis you are buying support front audio connector, please contact your dealer.

J12: CD Audio Line In

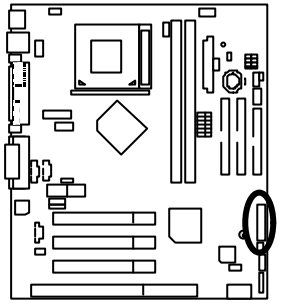


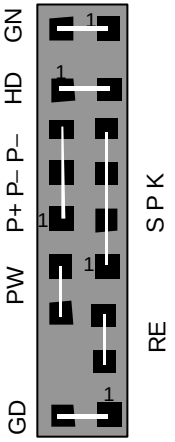


Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

Panel and Jumper Definition

J7 : 2x11 Pins Jumper

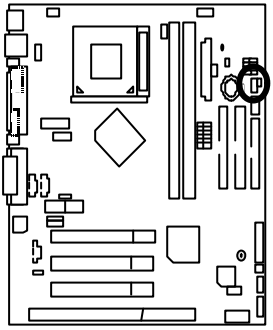


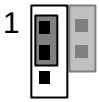


GN (Green Switch)	Open: Normal Operation Close: Entering Green Mode
GD (Green LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–)
HD (IDE Hard Disk Active LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–)
SPK (Speaker Connector)	Pin 1: VCC(+) Pin 2- Pin 3: NC Pin 4: Data(–)
RE (Reset Switch)	Open: Normal Operation Close: Reset Hardware System
P+P–P–(Power LED)	Pin 1: LED anode(+) Pin 2: LED cathode(–) Pin 3: LED cathode(–)
PW (Soft Power Connector)	Open: Normal Operation Close: Power On/Off

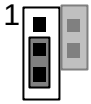
Please note:
Please connect the power LED, PC speaker, reset switch and power switch etc of your chassis front panel to the front panel jumper according to the pin assignment above.

JP2 : Clear CMOS Function





Normal (Default)

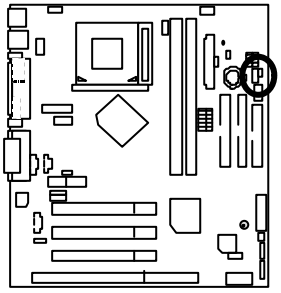


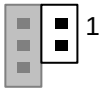
Clear CMOS

Pin No.	Definition
1-2 Close	Normal (Default)
2-3 Close	Clear CMOS

Please note:
You may clear the CMOS data to its default values by this jumper.

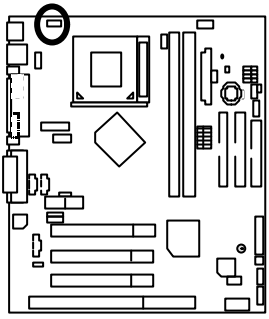
JP3: Case Open

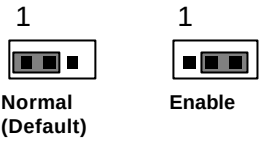




Pin No.	Definition
1	Signal
2	GND

JP4: USB Device Wake up Selection





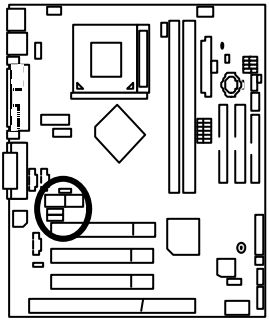
Pin No.	Definition
1-2 close	Normal (Default)
2-3 close	USB Wake Up

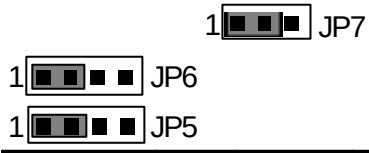
Please Note: (If you want to use "USB KB/MS Wake up from S3" function, you have to set the BIOS setting "USB KB/MS Wake up from S3" enabled, JP4 & JP9" enabled).

*(Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "USB KB/MS Wake up from S3". Remember to save the setting by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.)

JP5/JP6/JP7: Onboard AC97& AMR (Primary or Secondary) Select

(AMR→ Audio Modem Riser)





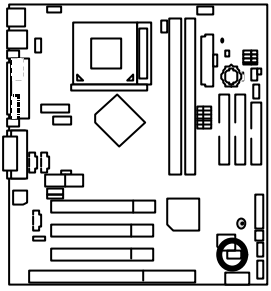
Jumper Function	JP5	JP6	JP7
Only AC97 (Default)	1-2	1-2	1-2
Only AMR (Primary)	3-4	3-4	2-3
AC97+MR (Secondary)	1-2 3-4	1-2	1-2

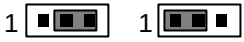
Please note:

JP7: 1-2 close: If you use software audio(onboard CODEC only), your modem riser must be "Secondary". JP7: 2-3 close: If you don't use onboard software audio, your audio/modem riser must be "Primary". Mainboard's software audio will be disabled.

There are two types of AMR/MR card in the market, Primary and secondary. If your AMR/MR card is primary, JP7 should be set to 2-3, if you have secondary AMR/MR card JP7 should be set to 1-2. Warning! If Primary AMR/RM card is used, on-board audio will be disabled.

JP8 : BIOS Write Protection



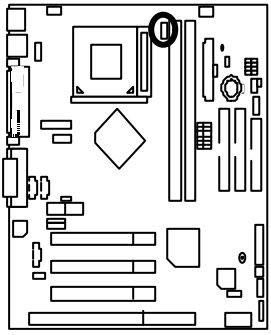


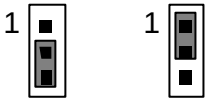
Normal (Default) **Write Protection**

Pin No.	Definition
1-2close	Write Protection
2-3close	Normal (Default)

Please note: To flash/upgrade BIOS on this MB JP8 must be opened. We recommend JP8 to be set to close, whenever user is not try to flash/upgrade the BIOS.

JP9: STR Function Selection

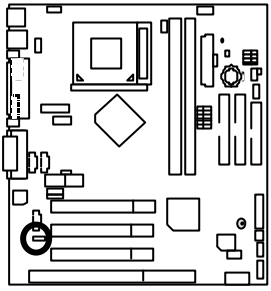


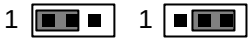


Disabled (Default) **Enabled**

Pin No.	Definition
2-3close	STR Disabled (Default)
1-2close	STR Enabled

JP12 : Front MIC

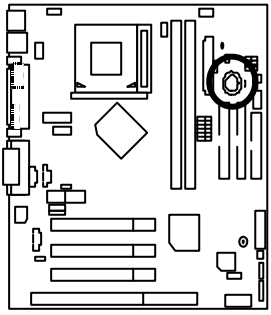




Disable (Default) **Enable**

Pin No.	Definition
1-2close	Disable (Default)
2-3close	Enable

BAT1 : Battery



CAUTION

- Danger of explosion if battery is incorrectly replaced.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to the manufacturer's instructions.

Performance List

The following performance data list is the testing results of some popular benchmark testing programs.

These data are just referred by users, and there is no responsibility for different testing data values gotten by users. (The different Hardware & Software configuration will result in different benchmark testing results.)

- CPU — Intel Pentium® III 1G Hz processor
- DRAM — (128 x 1)MB SDRAM (Mosel 0015PR V54C365804VCT7)
- CACHE SIZE — 256 KB included in CPU
- DISPLAY — Onboard VIA VT8601A 0046CD Graphics Controller
- STORAGE — Onboard IDE (IBM DTLA-307060)
- O.S. — Windows NT™ 4.0 SPK6a
- DRIVER — Display Driver at 1024 x 768 65536 colors 75Hz.
  VIA Bus Master IDE Driver Ver 2.1.49

Processor	Intel Pentium® III 1G Hz (7.5x133)
Winbench99	
CPU mark 99	78.6
FPU Winmark 99	5320
Business Disk Winmark 99	7980
Hi-End Disk Winmark 99	19700
Business Graphics Winmark 99	219
Hi-End Graphics Winmark 99	680
Winstone99	
Business Winstone 99	42.9
Hi-End Winstone 99	53.5

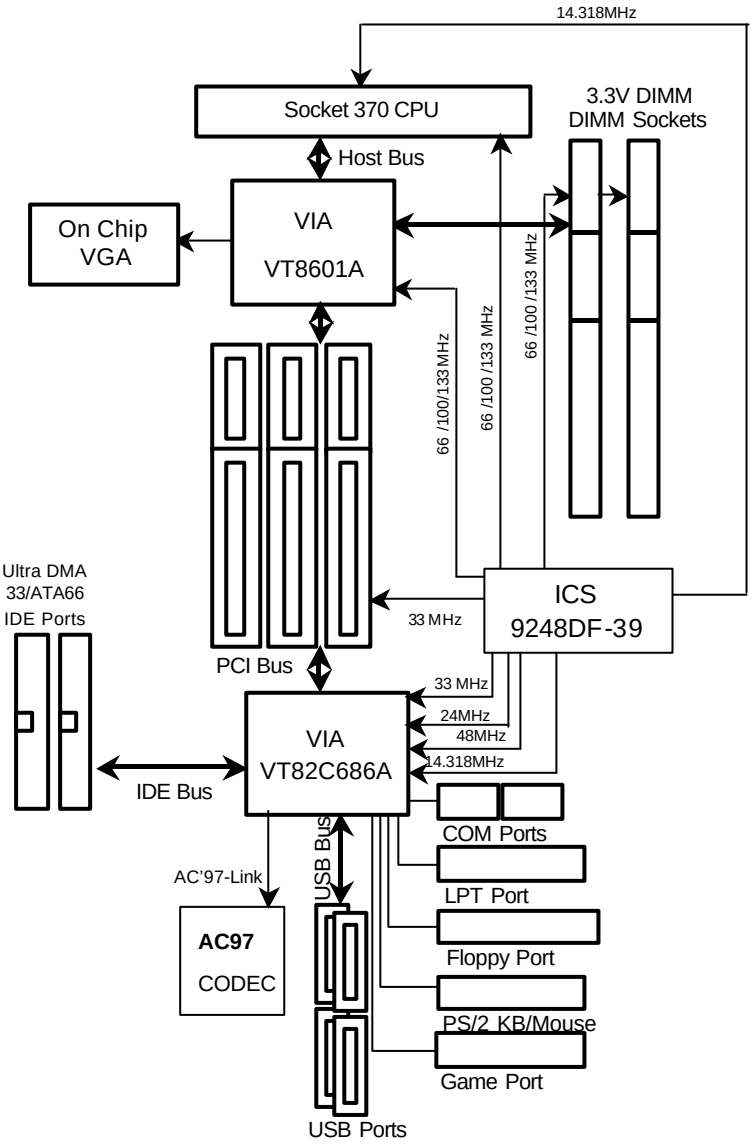
- CPU Intel Celeron 800MHz processor
- DRAM (128x1)MB SDRAM (Mosel 0015PR V54C365804VCT7)
- CACHE SIZE 66KB included in CPU
- DISPLAY Onboard VIA VT8601A 0046CD Graphics Controller
- STORAGE Onboard IDE (IBM DTLA-307060)
- O.S. Windows NT™ 4.0 SPK6a
- DRIVER Display Driver at 1024 x 768 65536 colors 75Hz.
  VIA Bus Master IDE Driver Ver 2.1.49

Processor	Intel Celeron 800MHz (12x66)
Winbench99	
CPU mark 99	51.4
FPU Winmark 99	4280
Business Disk Winmark 99	7380
Hi-End Disk Winmark 99	20000
Business Graphics Winmark 99	177
Hi-End Graphics Winmark 99	516
Winstone99	
Business Winstone 99	34.8
Hi-End Winstone 99	41.3

- CPU VIA Cyrix III 600MHz processor
- DRAM (128x1)MB SDRAM (Mosel 0015PR V54C365804VCT7)
- CACHE SIZE 256KB included in CPU
- DISPLAY Onboard VIA VT8601A 0046CD Graphics Controller
- STORAGE Onboard IDE (IBM DTLA-307060)
- O.S. Windows NT™ 4.0 SPK6a
- DRIVER Display Driver at 1024 x 768 65536 colors 75Hz.
  VIA Bus Master IDE Driver Ver 2.1.49

Processor	VIA Cyrix III 600MHz (4.5X133)
Winbench99	
CPU mark 99	24.2
FPU Winmark 99	994
Business Disk Winmark 99	6180
Hi-End Disk Winmark 99	17700
Business Graphics Winmark 99	133
Hi-End Graphics Winmark 99	269
Winstone99	
Business Winstone 99	26
Hi-End Winstone 99	18.7

Block Diagram



Suspend To RAM Installation

A.1 Introduce STR function:

Suspend-to-RAM (STR) is a Windows 98 ACPI sleep mode function. When recovering from STR (S3) sleep mode, the system is able, in just a few seconds, to retrieve the last "state" of the system before it went to sleep and recover to that state. The "state" is stored in memory (RAM) before the system goes to sleep. During STR sleep mode, your system uses only enough energy to maintain critical information and system functions, primarily the system state and the ability to recognize various "wake up" triggers or signals, respectively.

A.2 STR function Installation

Please use the following steps to complete the STR function installation.

Step-By-Step Setup

Step 1:

To utilize the STR function, the system must be in Windows 98 ACPI mode.

Putting Windows 98 into ACPI mode is fairly easy.

Setup with Windows 98 CD:

A. Insert the Windows 98 CD into your CD-ROM drive, select Start, and then Run.

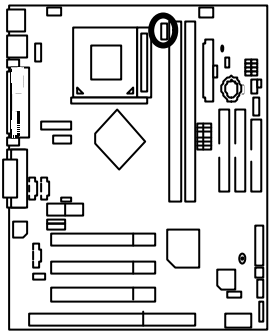
B. Type (without quotes) "D:\setup " in the window provided. Hit the enter key or click OK.

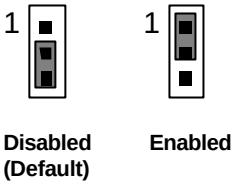
C. After setup completes, remove the CD, and reboot your system

(This manual assumes that your CD-ROM device drive letter is D:).

Step 2:

(If you want to use STR Function, please set jumper JP9 Closed.)





Disabled (Default) **Enabled**

Pin No.	Definition
2-3close	STR Disabled (Default)
1-2close	STR Enabled

Step 3:

Power on the computer and as soon as memory counting starts, press <Del>. You will enter BIOS Setup. Select the item "POWER MANAGEMENT SETUP", then select "ACPI Sleep Type : S3 / STR". Remember to save the settings by pressing "ESC" and choose the "SAVE & EXIT SETUP" option.

Congratulation! You have completed the installation and now can use the STR function.

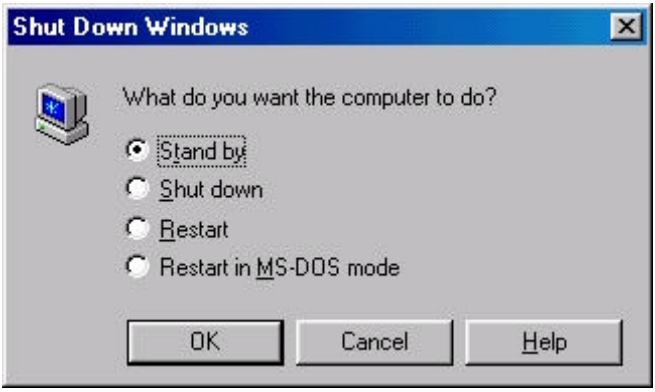
A.3 How to put your system into STR mode?

There are two ways to accomplish this:

1. Choose the “Stand by” item in the “Shut Down Windows” area.

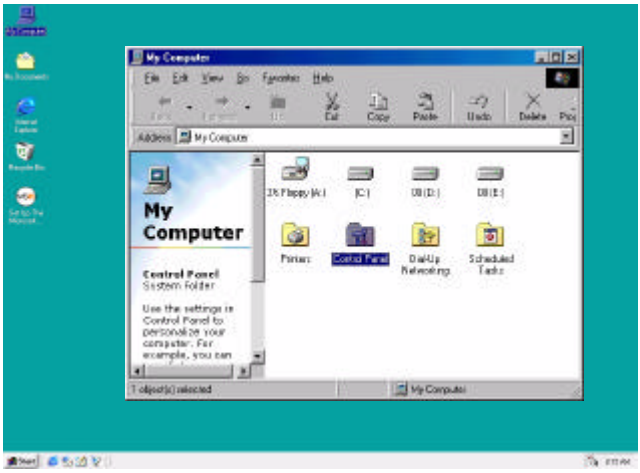
   A. Press the “Start” button and then select “Shut Down”

   B. Choose the “Stand by” item and press “OK”

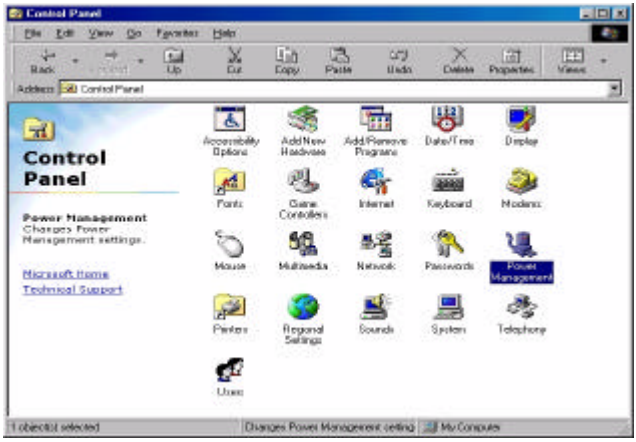


2. Define the system ”power on” button to initiate STR sleep mode:

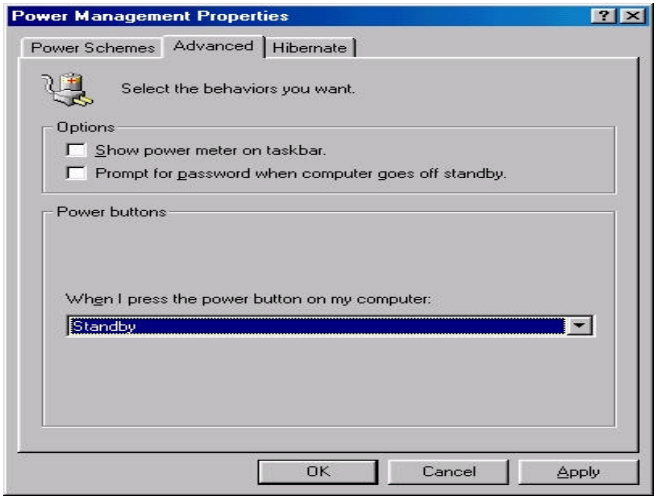
A. Double click “My Computer” and then “Control Panel”


My Computer
My Computer
Control Panel
System Folder
Use the settings in Control Panel to personalize your computer. For example, you can

B. Double click the “ Power Management” item.



C. Select the “Advanced” tab and “Standby” mode in Power Buttons.



D. Restart your computer to complete setup.

Now when you want to enter STR sleep mode, just momentarily press the “Power on” button.

A.4 How to recover from the STR sleep mode?

There are five ways to “wake up” the system:

1. Press the “Power On” button.
2. Use the “PS/2 Mouse Power On” function.
3. Use the “Resume by Alarm” function.
4. Use the “Modem Ring On” function.
5. Use the “Wake On LAN” function.

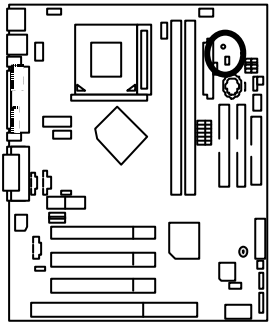
A.5 Notices :

1. In order for STR to function properly, several hardware and software requirements must be satisfied:

   A. Your ATX power supply must comply with the ATX 2.01 specification (provide more than 720 mA 5V Stand-By current).

   B. Your SDRAM must be PC-100 compliant.

2. Jumper JP10 is provided to connect to the STR LED in your system chassis. [Your chassis may not provide this feature.] The STR LED will be illuminated when your system is in STR sleep mode.



DIMM LED

STR LED Connector External.

Memory Installation

The motherboard has 2 dual inline memory module (DIMM) sockets. The BIOS will automatically detects memory type and size. To install the memory module, just push it vertically into the DIMM Slot .The DIMM module can only fit in one direction due to the two notch. Memory size can vary between sockets.

Install memory in any combination table:

DIMM	168-pin SDRAM DIMM Modules	
DIMM 1	Supports 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs
DIMM 2	Supports 16 / 32 / 64 / 128 / 256 / 512 MB	X 1 pcs

Total System Memory (Max 1GB)

Page Index for BIOS Setup	Page
The Main Menu	P.51
Standard CMOS Setup	P.53
BIOS Features Setup	P.56
Chipset Features Setup	P.58
Power Management Setup	P.60
PNP/ PCI Configuration	P.63
Load BIOS Defaults	P.65
Load Setup Defaults	P.66
Integrated Peripherals	P.67
Hardware Monitor Setup	P.71
Supervisor Password / User Password	P.72
IDE HDD Auto Detection	P.73
Save & Exit Setup	P.74
Exit Without Saving	P.75

BIOS Setup

BIOS Setup is an overview of the BIOS Setup Program. The program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

ENTERING SETUP

Power ON the computer and press <Del> immediately will allow you to enter Setup. If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" bottom on the system case. You may also restart by simultaneously press <Ctrl> – <Alt>– <Del> keys.

CONTROL KEYS

<↑>	Move to previous item
<↓>	Move to next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Esc>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<+/PgUp>	Increase the numeric value or make changes
<-/PgDn>	Decrease the numeric value or make changes
<F1>	General help, only for Status Page Setup Menu and Option Page Setup Menu
<F2>	Reserved
<F3>	Reserved
<F4>	Reserved
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
<F7>	Load the Setup Defaults.
<F8>	Reserved
<F9>	Reserved
<F10>	Save all the CMOS changes, only for Main Menu

GETTING HELP

Main Menu

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Status Page Setup Menu / Option Page Setup Menu

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc>.

The Main Menu

Once you enter AMI BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from nine setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

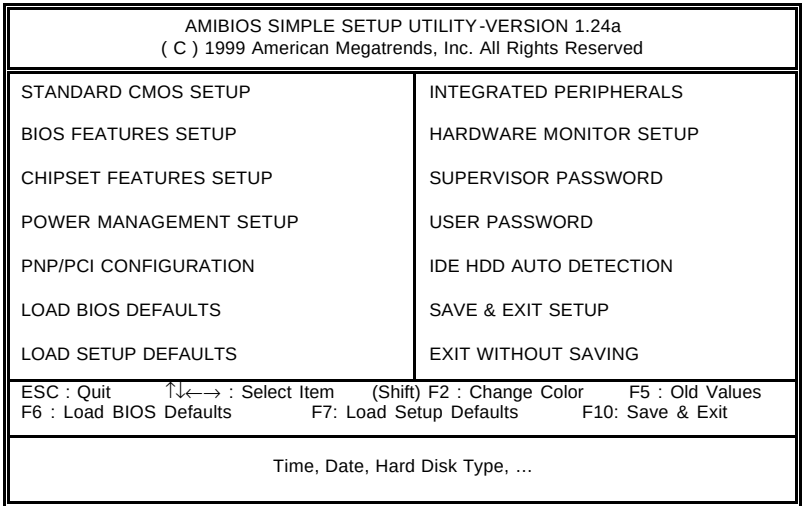

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGURATION
LOAD BIOS DEFAULTS
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
IDE HDD AUTO DETECTION
SAVE & EXIT SETUP
EXIT WITHOUT SAVING
ESC : Quit ↑↓←→ : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Time, Date, Hard Disk Type, ...

Figure 1: Main Menu

- Standard CMOS Setup

  This setup page includes all the items in standard compatible BIOS.

- BIOS Features Setup

  This setup page includes all the items of AMI special enhanced features.

- Chipset Features Setup

  This setup page includes all the items of chipset special features.

- Power Management Setup

  This setup page includes all the items of Green function features.

- PnP/PCI Configurations

  This setup page includes all the configurations of PCI & PnP ISA resources.

- Load BIOS Defaults

  Bios Defaults indicates the value of the system parameter which the system would be in the safe configuration.

- Load Setup Defaults

  Setup Defaults indicates the value of the system parameter which the system would be in the most appropriate configuration.

- Integrated Peripherals

  This setup page includes all onboard peripherals.

- Hardware Monitor Setup

  This setup page is auto detect fan and temperature status.

- Supervisor password

  Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.

- User password

  Change, set, or disable password. It allows you to limit access to the system.

- IDE HDD auto detection

  Automatically configure hard disk parameters.

- Save & Exit Setup

  Save CMOS value settings to CMOS and exit setup.

- Exit Without Saving

  Abandon all CMOS value changes and exit setup.

Standard CMOS Setup

The items in Standard CMOS Features Menu (Figure 2) are divided into 9 categories. Each category includes no, one or more than one setup items. Use the arrows to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

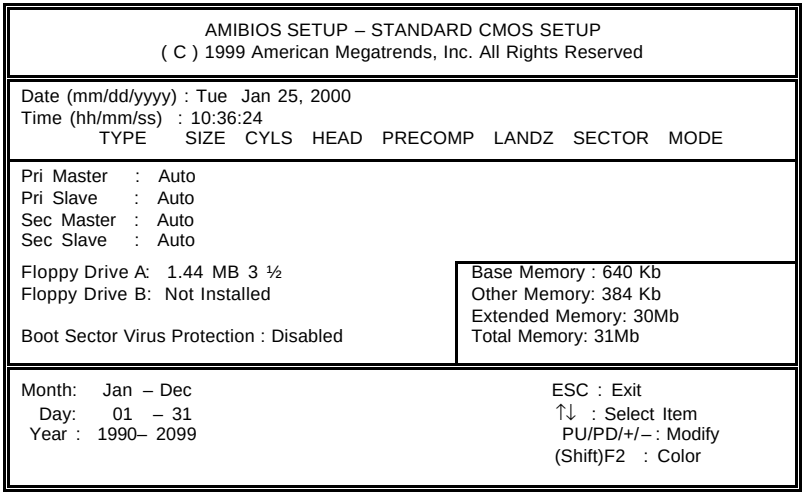

AMIBIOS SETUP – STANDARD CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
Date (mm/dd/yyyy) : Tue Jan 25, 2000
Time (hh/mm/ss) : 10:36:24
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Pri Master : Auto
Pri Slave : Auto
Sec Master : Auto
Sec Slave : Auto
Floppy Drive A: 1.44 MB 3 ½
Floppy Drive B: Not Installed
Boot Sector Virus Protection : Disabled
Base Memory : 640 Kb
Other Memory: 384 Kb
Extended Memory: 30Mb
Total Memory: 31Mb
Month: Jan – Dec
Day: 01 – 31
Year : 1990– 2099
ESC : Exit
↑↓ : Select Item
PU/PD/+/– : Modify
(Shift)F2 : Color

Figure 2: Standard CMOS Setup

- Date

The date format is <Week>, <Month>, <Day>, <Year>.

Week	The week, from Sun to Sat, determined by the BIOS and is display-only
Month	The month, Jan. Through Dec.
Day	The day, from 1 to 31 (or the maximum allowed in the month)
Year	The year, from 1990 through 2099

- Time

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

- IDE Primary Master, Slave / Secondary Master, Slave

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and user definable type. User type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	number of heads
PRECOMP	write precomp
LANDZONE	Landing zone
SECTORS	number of sectors

If a hard disk has not been installed select NONE and press <Enter>.

- Drive A type / Drive B type

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5.25 in.	5.25 inch PC-type standard drive; 360K byte capacity.
1.2M, 5.25 in.	5.25 inch AT-type high-density drive; 1.2M byte capacity (3.5 inch when 3 Mode is Enabled).
720K, 3.5 in.	3.5 inch double-sided drive; 720K byte capacity
1.44M, 3.5 in.	3.5 inch double-sided drive; 1.44M byte capacity.
2.88M, 3.5 in.	3.5 inch double-sided drive; 2.88M byte capacity.

- Boot Sector Virus Protection

If it is set to enable, the category will flash on the screen when there is any attempt to write to the boot sector or partition table of the hard disk drive. The system will halt and the following error message will appear in the mean time. You can run anti-virus program to locate the problem.

Enabled	Activate automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table
Disabled	No warning message to appear when anything attempts to access the boot sector or hard disk partition table. (Default Value)

- Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory

The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.

The value of the base memory is typically 512 K for systems with 512 K memory installed on the motherboard, or 640 K for systems with 640 K or more memory installed on the motherboard.

Extended Memory

The BIOS determines how much extended memory is present during the POST.

This is the amount of memory located above 1 MB in the CPU's memory address map.

Other Memory

This refers to the memory located in the 640 K to 1024 K address space. This is memory that can be used for different applications.

DOS uses this area to load device drivers to keep as much base memory free for application programs. Most use for this area is Shadow RAM

BIOS Features Setup

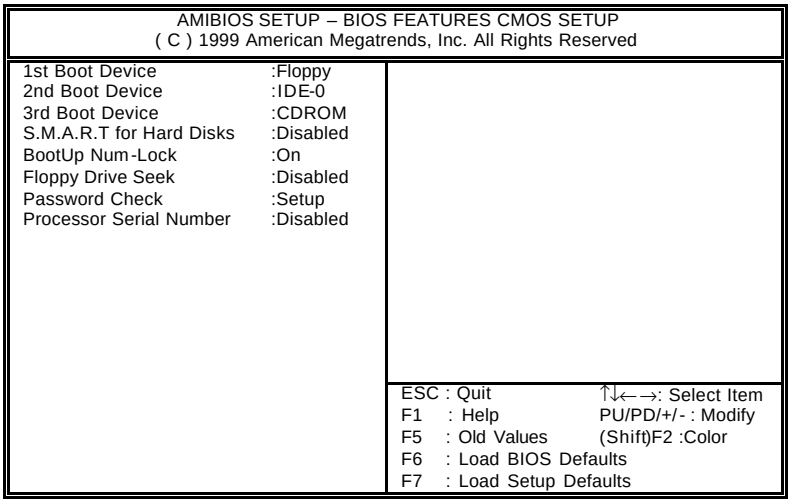

AMIBIOS SETUP – BIOS FEATURES CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
1st Boot Device :Floppy
2nd Boot Device :IDE-0
3rd Boot Device :CDROM
S.M.A.R.T for Hard Disks :Disabled
BootUp Num-Lock :On
Floppy Drive Seek :Disabled
Password Check :Setup
Processor Serial Number :Disabled
ESC : Quit
↑↓←→: Select Item
F1 : Help
PU/PD/+/- : Modify
F5 : Old Values
(Shift)F2 :Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

Figure 3: BIOS Features Setup

- 1st / 2nd / 3rd Boot Device

  The default value is Floppy or LS / ZIP A: or ATAPI ZIP C: or CDROM or SCSI or NET WORK or IDE-0~IDE-3 or USB FDD or Disabled.

Floppy	Boot Device by Floppy.
LS / ZIP A:	Boot Device by LS / ZIP A:.
CDROM	Boot Device by CDROM.
SCSI	Boot Device by SCSI.
NETWORK	Boot Device by NETWORK.
IDE-0~IDE-3	Boot Device by IDE-0~IDE-3.
Disabled	Boot Device by Disabled.
ATAPI ZIP C:	Boot Device by ATAPI ZIP C:.
USB FDD	Boot Device by USB FDD.

- S.M.A.R.T. for Hard Disks

Enable	Enable S.M.A.R.T. Hard for Disks.
Disable	Disable S.M.A.R.T. Hard for Disks. (Default Value)

- Boot Up Num-Lock

On	Keypad is number keys. (Default Value)
Off	Keypad is arrow keys.

- Floppy Drive Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360 type is 40 tracks while 720 , 1.2 and 1.44 are all 80 tracks.

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720, 1.2 or 1.44 drive type as they are all 80 tracks.
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360. (Default Value)

- Password Check

Setup	Set Password Check to Setup. (Default Value)
Always	Set Password Check to Always.

- Processor Serial Number

Disabled	Disabled CPU Serial Number. (Default Value)
Enabled	Enabled CPU Serial Number.

Chipset Features Setup

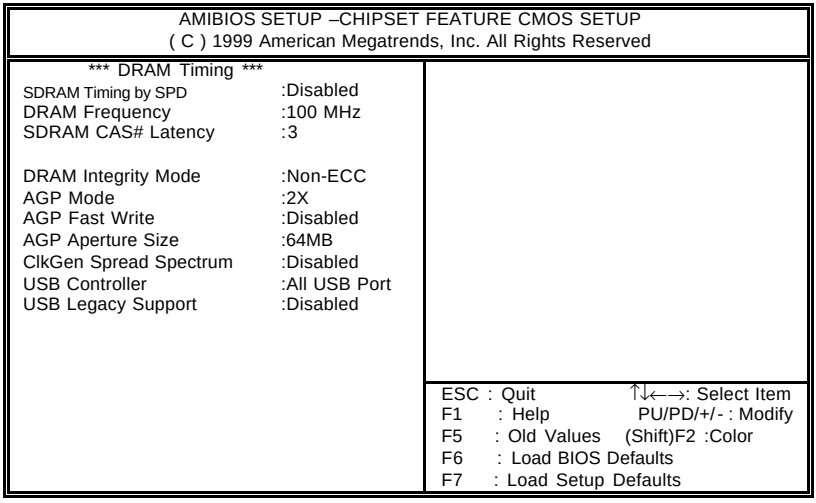

AMIBIOS SETUP –CHIPSET FEATURE CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
*** DRAM Timing ***
SDRAM Timing by SPD :Disabled
DRAM Frequency :100 MHz
SDRAM CAS# Latency :3
DRAM Integrity Mode :Non-ECC
AGP Mode :2X
AGP Fast Write :Disabled
AGP Aperture Size :64MB
ClkGen Spread Spectrum :Disabled
USB Controller :All USB Port
USB Legacy Support :Disabled
ESC : Quit ↑↓←→: Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 :Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

Figure 4: Chipset Features Setup

- SDRAM Timing by SPD

Disabled	Disabled SDRAM Timing by SPD. (Default Value)
Enabled	Enabled SDRAM Timing by SPD.

- DRAM Frequency

100MHz	Set DRAM Frequency is 100MHz. (Default Value)
133MHz	Set DRAM Frequency is 133MHz.

- SDRAM CAS# Latency

3	For Slower SDRAM DIMM module. (Default Value)
2	For Fastest SDRAM DIMM module.

- DRAM Integrity Mode

ECC	For 72 bit ECC type DIMM Model.
Non-ECC	Normal Setting. (Default Value)

- AGP Mode

1X	Set AGP Mode is 1X.
2X	Set AGP Mode is 2X. (Default Value)

- AGP Fast Write

Disabled	Disabled AGP Fast Write (Default Value)
Enabled	Enabled AGP Fast Write

- AGP Aperture Size

4MB	Set AGP Aperture Size to 4MB.
8MB	Set AGP Aperture Size to 8 MB.
16MB	Set AGP Aperture Size to 16 MB.
32MB	Set AGP Aperture Size to 32 MB.
64MB	Set AGP Aperture Size to 64 MB. (Default Value)
128MB	Set AGP Aperture Size to 128 MB.
256MB	Set AGP Aperture Size to 256 MB.

- ClkGen Spread Spectrum

Enabled	Enabled ClkGen Spread Spectrum.
Disabled	Normal function. (Default Value)

- USB Controller

All USB Port	Set USB Controller Function used all USB Port. (Default Value)
USB Port 0&1	Set USB Controller Function used USB Port 0&1.
USB Port 2&3	Set USB Controller Function used USB Port 2&3.
Disabled	USB Controller Function Disabled.

- USB Legacy Support

Keyboard / FDD	Set USB Legacy Support Keyboard / FDD.
KB / Mouse / FDD	Set USB Legacy Support Keyboard / Mouse / FDD.
Disabled	Disabled USB Legacy Support Function. (Default Value)

Power Management Setup

AMIBIOS SETUP –POWER MANAGEMENT SETUP (C) 1999 American Megatrends, Inc. All Rights Reserved			
ACPI Standby State	:S1/POS	RTC Alarm Date	:15
USB Device Wakeup From S3-S5	:Disabled	RTC Alarm Hour	:12
Suspend Time Out(Minute)	:Disabled	RTC Alarm Minute	:30
Display Activity	:Ignore	RTC Alarm Second	:30
IRQ3	:Monitor		
IRQ 4	:Monitor		
IRQ 5	:Ignore		
IRQ 7	:Monitor		
IRQ 9	:Ignore		
IRQ 10	:Ignore		
IRQ 11	:Ignore		
IRQ 13	:Ignore		
IRQ 14	:Monitor		
IRQ 15	:Ignore		
Soft-off by Power Button	:Instant off		
System after AC Back	:Soft-Off	ESC : Quit	↑↓←→: Select Item
Modem Use IRQ	:4	F1 : Help	PU/PD/+/- : Modify
Resume On Ring / LAN	:Enabled	F5 : Old Values	(Shift)F2 :Color
PME Event Wake up	:Enabled	F6 : Load BIOS Defaults	
RTC Alarm Power On	:Disabled	F7 : Load Setup Defaults	

Figure 5: Power Management Setup

- ACPI Standby State

S1/POS	Set ACPI Standby State is S1. (Default Value)
S3/STR	Set ACPI Standby State is S3.

- USB Device Wakeup From S3-S5

Disabled	Disabled USB KB Wakeup From S3-S5 function. (Default Value)
Enabled	Enabled USB KB Wakeup From S3-S5 function.

- Suspend Time Out (Minute.)

Disabled	Disabled Suspend Time Out Function. (Default Value)
1	Enabled Suspend Time Out after 1min.
2	Enabled Suspend Time Out after 2min.
4	Enabled Suspend Time Out after 4min.
8	Enabled Suspend Time Out after 8min.
10	Enabled Suspend Time Out after 10min.
20	Enabled Suspend Time Out after 20min.
30	Enabled Suspend Time Out after 30min.
40	Enabled Suspend Time Out after 40min.
50	Enabled Suspend Time Out after 50min.
60	Enabled Suspend Time Out after 60min.

- Display Activity

Ignore	Ignore Display Activity . (Default Value)
Monitor	Monitor Display Activity.

- IRQ 3~IRQ15

Ignore	Ignore IRQ3 ~IRQ15.
Monitor	Monitor IRQ3~IRQ15.

- Soft-off by Power Button

Instant off	Soft switch ON/OFF for Power Button. (Default Value)
Delay-4Sec	Soft switch ON 4 Sec for Power off.

- System after AC Back

Power-Off	Set Restore on AC/Power Loss is Power off.
Full-On	Set Restore on AC/Power Loss is Full on.
Memory	Set Restore on AC/Power Loss is Last state mode. (Default Value)

- MODEM Use IRQ

NA	Set MODEM Use IRQ to NA.
3	Set MODEM Use IRQ to 3.
4	Set MODEM Use IRQ to 4. (Default Value)
5	Set MODEM Use IRQ to 5.
7	Set MODEM Use IRQ to 7.

- Modem Ring On/ LAN

Disabled	Disabled Modem Ring On / Wake On LAN function.
Enabled	Enabled Modem Ring On / Wake On LAN function. (Default Value)

- PME Event Wake up

Disabled	Disabled PME Event Wake up function.
Enabled	Enabled PME Event Wake up function. (Default Value)

- RTC Alarm Power On

You can set "RTC Alarm Power On" item to enabled and key in Data/time to power on system.

Disabled	Disable this function. (Default Value)
Enabled	Enable alarm function to POWER ON system.

If RTC Alarm Lead To Power On is Enabled.

RTC Alarm Date :	Every Day,1~31
RTC Alarm Hour:	0~23
RTC Alarm Minute :	0~59
RTC Alarm Second :	0~59

PnP/PCI Configurations

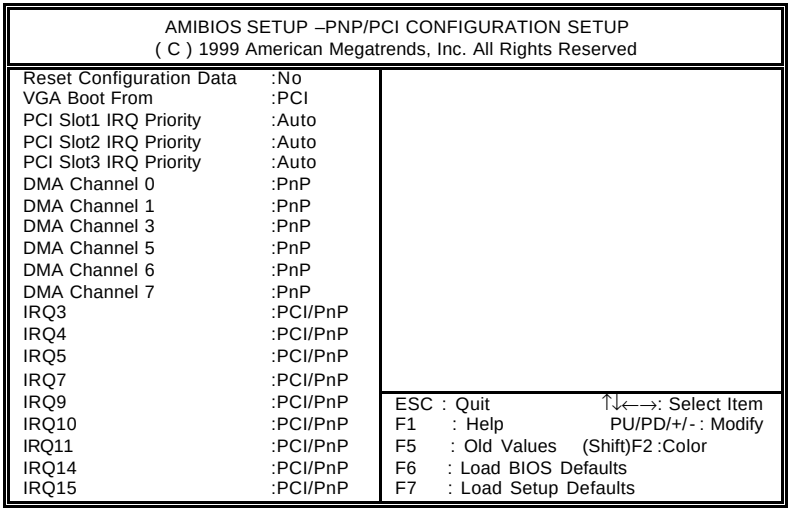

AMIBIOS SETUP –PNP/PCI CONFIGURATION SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
Reset Configuration Data :No
VGA Boot From :PCI
PCI Slot1 IRQ Priority :Auto
PCI Slot2 IRQ Priority :Auto
PCI Slot3 IRQ Priority :Auto
DMA Channel 0 :PnP
DMA Channel 1 :PnP
DMA Channel 3 :PnP
DMA Channel 5 :PnP
DMA Channel 6 :PnP
DMA Channel 7 :PnP
IRQ3 :PCI/PnP
IRQ4 :PCI/PnP
IRQ5 :PCI/PnP
IRQ7 :PCI/PnP
IRQ9 :PCI/PnP
IRQ10 :PCI/PnP
IRQ11 :PCI/PnP
IRQ14 :PCI/PnP
IRQ15 :PCI/PnP
ESC : Quit ↑↓←→: Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 :Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

Figure 6: PnP/PCI Configuration

- Reset Configuration Data

Yes	Reset configuration data.
No	Disabled this function. (Default Value)

- VGA Boot From

Onchip AGP	Primary Graphics Adapter From Add-on AGP.
PCI	Primary Graphics Adapter From OnBoard PCI. (Default Value)

- PCI Slot 1 ~ Slot 3 IRQ Priority

Auto	Auto Set PCI Slot 1~Slot 3 IRQ Priority
3,4,5.7,9,10,11	Setting PCI Slot 1~Slot 3 IRQ.

- DMA Channel (0,1,3,5,6,7)

PnP	The resource is used by PnP device.
ISA/EISA	The resource is used by ISA / EISA device (PCI or ISA).

- IRQ -(3,4,5,7,9, 10,11), assigned to (“ISA / EISA” or “PCI/PnP”)

ISA/EISA	The resource is used by Legacy ISA device.
PCI/PnP	The resource is used by PCI/ PnP device.

Load BIOS Defaults

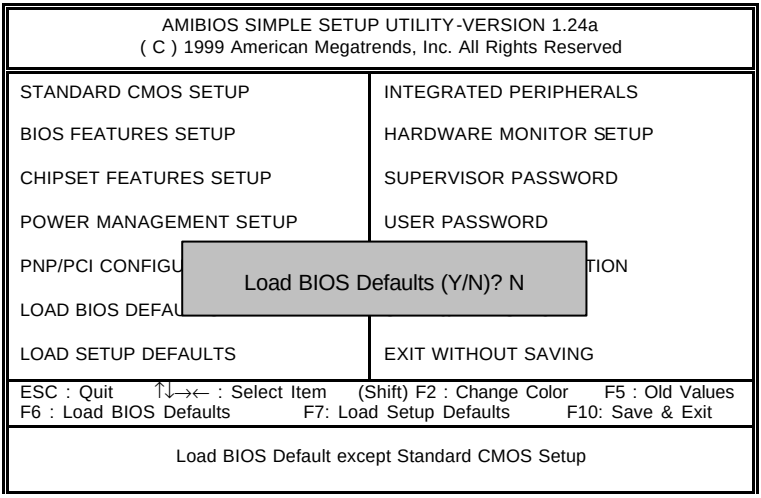

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGU
LOAD BIOS DEFAU
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
TION
EXIT WITHOUT SAVING
Load BIOS Defaults (Y/N)? N
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Load BIOS Default except Standard CMOS Setup

Figure 7: Load BIOS Defaults

- Load BIOS Defaults

  BIOS defaults contain the most appropriate values of the system parameters that allow minimum system performance.

Load Setup Defaults

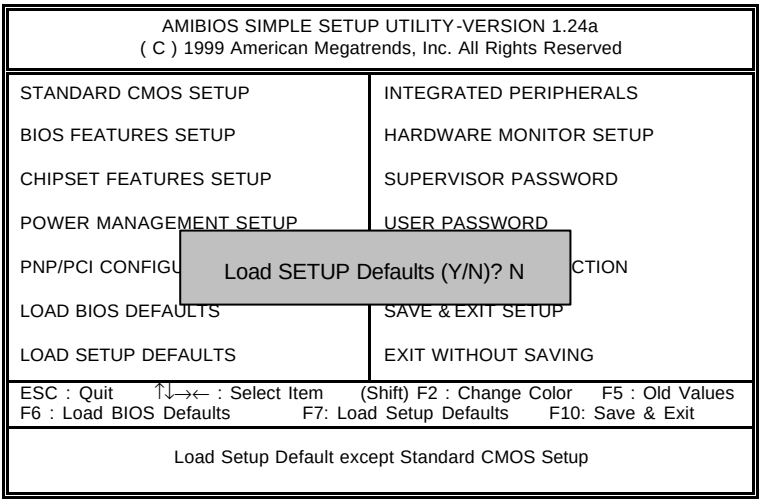

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGU
LOAD BIOS DEFAULTS
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
CTION
SAVE & EXIT SETUP
EXIT WITHOUT SAVING
Load SETUP Defaults (Y/N)? N
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Load Setup Default except Standard CMOS Setup

Figure 8: Load Setup Defaults

- Load Setup Defaults

  Selecting this field loads the factory defaults for BIOS and Chipset Features which the system automatically detects.

Integrated Peripherals

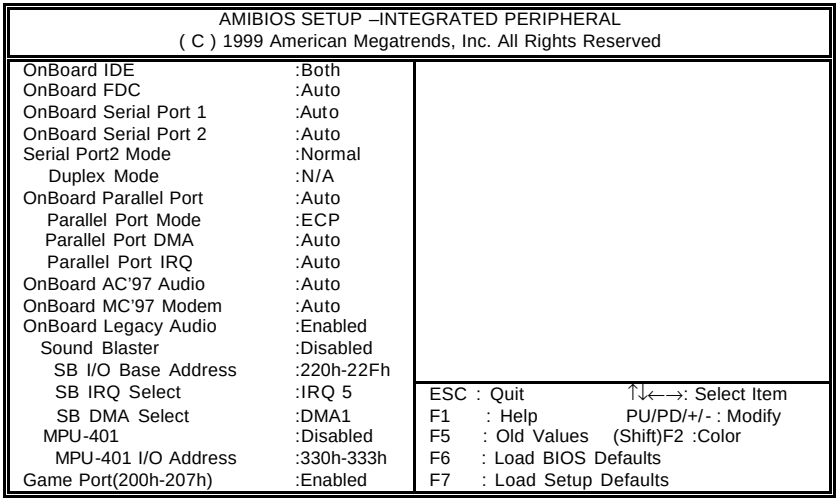

AMIBIOS SETUP –INTEGRATED PERIPHERAL
(C) 1999 American Megatrends, Inc. All Rights Reserved
OnBoard IDE :Both
OnBoard FDC :Auto
OnBoard Serial Port 1 :Auto
OnBoard Serial Port 2 :Auto
Serial Port2 Mode :Normal
Duplex Mode :N/A
OnBoard Parallel Port :Auto
Parallel Port Mode :ECP
Parallel Port DMA :Auto
Parallel Port IRQ :Auto
OnBoard AC'97 Audio :Auto
OnBoard MC'97 Modem :Auto
OnBoard Legacy Audio :Enabled
Sound Blaster :Disabled
SB I/O Base Address :220h-22Fh
SB IRQ Select :IRQ 5
SB DMA Select :DMA1
MPU-401 :Disabled
MPU-401 I/O Address :330h-333h
Game Port(200h-207h) :Enabled
ESC : Quit ↑↓←→: Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 :Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

Figure 9: Integrated Peripherals

- OnBoard IDE

Disabled	Disabled OnBoard IDE
Both	Set OnBoard IDE is Both (Default Value).
Primary	Set OnBoard IDE is Primary
Secondary	Set OnBoard IDE is Secondary

- On Board FDC

Auto	Set On Board FDC is Auto (Default Value).
Disabled	Disabled On Board FDC
Enabled	Enabled On Board FDC

- Onboard Serial Port 1

Auto	BIOS will automatically setup the port 1 address (Default Value).
3F8/COM1	Enable onboard Serial port 1 and address is 3F8.
2F8/COM2	Enable onboard Serial port 1 and address is 2F8.
3E8/COM3	Enable onboard Serial port 1 and address is 3E8.
2E8/COM4	Enable onboard Serial port 1 and address is 2E8.
Disabled	Disable onboard Serial port 1.

- Onboard Serial Port 2

Auto	BIOS will automatically setup the port 2 address (**Default Value**).
3F8/COM1	Enable onboard Serial port 2 and address is 3F8.
2F8/COM2	Enable onboard Serial port 2 and address is 2F8.
3E8/COM3	Enable onboard Serial port 2 and address is 3E8.
2E8/COM4	Enable onboard Serial port 2 and address is 2E8.
Disabled	Disable onboard Serial port 2.

- Serial Port 2 Mode

ASKIR	Set onboard I/O chip Serial Port 2 to ASKIR Mode.
IrDA	Set onboard I/O chip Serial Port 2 to IrDA Mode.
Normal	Set onboard I/O chip Serial Port 2 to Normal Mode. (**Default Value**)

- Duplex Mode

Half Duplex	IR Function Duplex Half.
N/A	Disabled this function. (**Default Value**)
Full Duplex	IR Function Duplex Full.

- On Board Parallel port

378	Enable On Board LPT port and address is 378.
278	Enable On Board LPT port and address is 278.
3BC	Enable On Board LPT port and address is 3BC.
Auto	Set On Board LPT port is Auto. (**Default Value**).
Disabled	Disable On Board LPT port.

- Parallel Port Mode

EPP	Using Parallel port as Enhanced Parallel Port.
ECP	Using Parallel port as Extended Capabilities Port. (**Default Value**)
Normal	Normal Operation.

- Parallel Port DMA

Auto	Set Auto to parallel port mode DMA Channel. (**Default Value**)
N/A	Disabled this function.
3	Set Parallel Port DMA is 3.
1	Set Parallel Port DMA is 1.
0	Set Parallel Port DMA is 0.

- Parallel Port IRQ

7	Set Parallel Port IRQ is 7.
Auto	Set Auto to parallel Port IRQ DMA Channel. . (**Default Value**).
5	Set Parallel Port IRQ is 5.

- OnBoard AC'97 Audio

Auto	Set AC'97 Audio to Auto (Default Value).
Disabled	Disabled AC'97 Audio.

- OnBorard MC'97 Modem

Auto	Set MC'97 Modem to Auto (Default Value).
Disabled	Disabled MC'97 Modem.

- OnBorard Legacy Audio

Enabled	Enabled OnBoard Legacy Audio. (Default Value)
Disabled	Disabled OnBoard Legacy Audio.

- Sound Blaster

Enabled	Enabled Sound Blaster.
Disabled	Disabled Sound Blaster. (Default Value)

- SB I/O Base Address

220h-22Fh	Set SB I/O Base Address is 220h-22Fh. (Default Value)
280h-28Fh	Set SB I/O Base Address is 280h-28Fh.
260h-26Fh	Set SB I/O Base Address is 260h-26Fh.
240h-24Fh	Set SB I/O Base Address is 240h-24Fh.

- SB IRQ Select

IRQ 5 / 7 / 9 / 10. (Default Value: 5)

- SB DMA Select

DMA 0 / 1 / 2/ 3. (Default Value: 1)

- MPU-401

Enabled	Enabled MPU-401.
Disabled	Disabled MPU-401. (Default Value)

- MUP-401 I/O Address

330h-333h	Set MUP-401 I/O Address is 330h-333h. (Default Value)
300h-303h	Set MUP-401 I/O Address is 300h-303h.
310h-313h	Set MUP-401 I/O Address is 310h-313h.
320h-323h	Set MUP-401 I/O Address is 320h-323h.

- Game Port (200h-207h)

Disabled	Disabled Game Port (200h-207h).
Enabled	Enabled Game Port (200h-207h). (Default Value)

Hardware Monitor

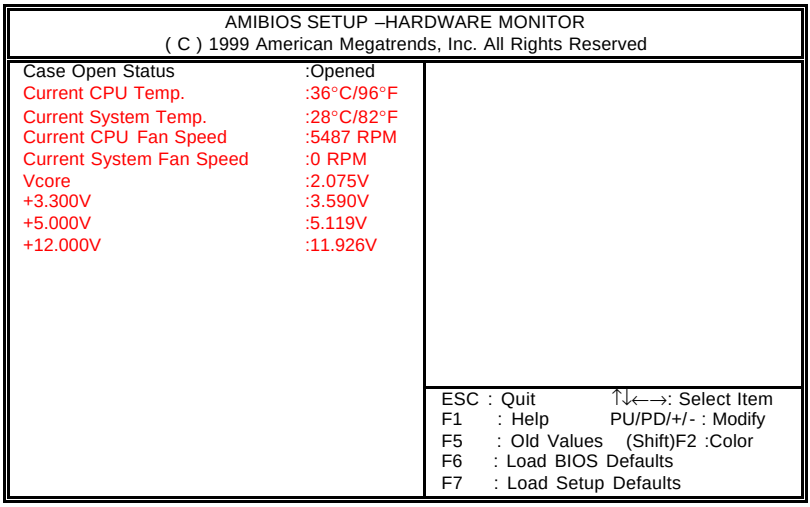

AMIBIOS SETUP –HARDWARE MONITOR
(C) 1999 American Megatrends, Inc. All Rights Reserved
Case Open Status :Opened
Current CPU Temp. :36°C/96°F
Current System Temp. :28°C/82°F
Current CPU Fan Speed :5487 RPM
Current System Fan Speed :0 RPM
Vcore :2.075V
+3.300V :3.590V
+5.000V :5.119V
+12.000V :11.926V
ESC : Quit ↑↓←→: Select Item
F1 : Help PU/PD/+/- : Modify
F5 : Old Values (Shift)F2 :Color
F6 : Load BIOS Defaults
F7 : Load Setup Defaults

Figure 10: Hardware Monitor

- Case Open Status

  If the case is closed, “Case Open Status” will show “Closed”.
  If the case have been opened, “Case Opened” will show “Open”.

- Current CPU Temp. (°C / °F)

  Detect CPU Temperature automatically.

- Current System Tem. (°C / °F)

  Detect System Temperature automatically.

- Current CPU FAN Speed

  Detect CPU Fan speed status automatically .

- Current System FAN Speed

  Detect System Fan speed status automatically .

- Current Voltage (V) VCORE / +3.3V / +12V / +5V

  Detect system’s voltage status automatically.

Set Supervisor / User Password

When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

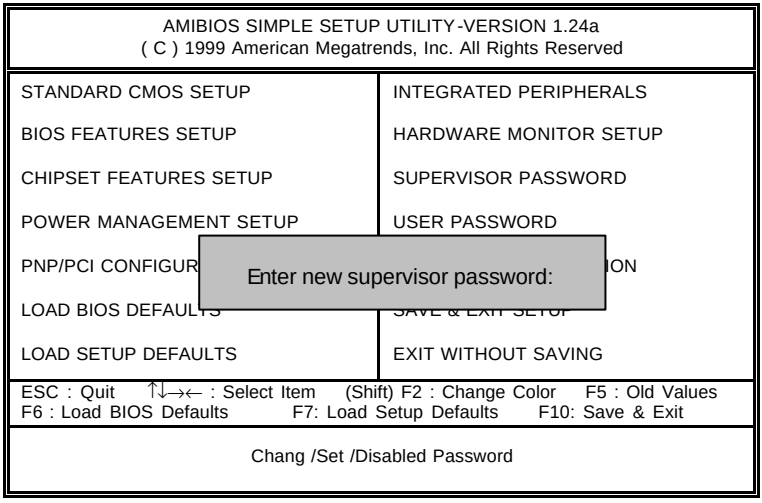

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGUR
LOAD BIOS DEFAULTS
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
ION
EXIT WITHOUT SAVING
Enter new supervisor password:
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Chang /Set /Disabled Password

Figure 11: Password Setting

Type the password, up to eight characters, and press <Enter>. The password typed now will clear the previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable password, just press <Enter> when you are prompted to enter password. A message "PASSWORD DISABLED" will appear to confirm the password being disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

If you select "Always" at "Password Check" Option in BIOS Features Setup Menu, you will be prompted for the password every time the system is rebooted or any time you try to enter Setup Menu. If you select "Setup" at "Password Check" Option in BIOS Features Setup Menu, you will be prompted only when you try to enter Setup.

IDE HDD AUTO Detection

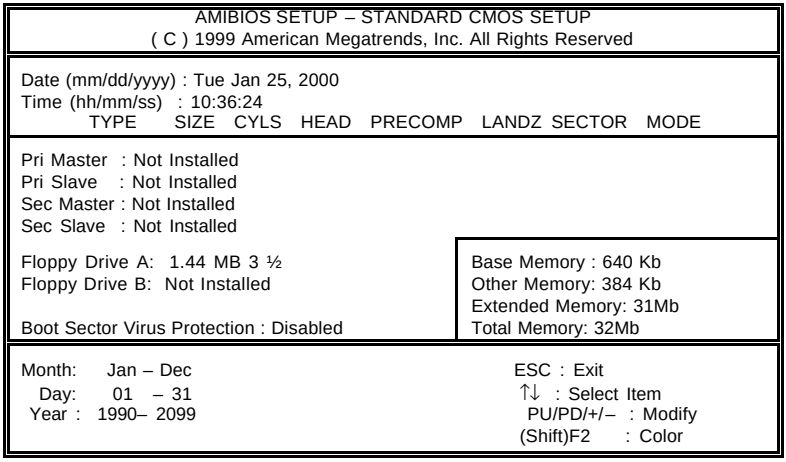

AMIBIOS SETUP – STANDARD CMOS SETUP
(C) 1999 American Megatrends, Inc. All Rights Reserved
Date (mm/dd/yyyy) : Tue Jan 25, 2000
Time (hh/mm/ss) : 10:36:24
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Pri Master : Not Installed
Pri Slave : Not Installed
Sec Master : Not Installed
Sec Slave : Not Installed
Floppy Drive A: 1.44 MB 3 ½
Floppy Drive B: Not Installed
Boot Sector Virus Protection : Disabled
Base Memory : 640 Kb
Other Memory: 384 Kb
Extended Memory: 31Mb
Total Memory: 32Mb
Month: Jan – Dec
Day: 01 – 31
Year : 1990– 2099
ESC : Exit
↑↓ : Select Item
PU/PD/+/– : Modify
(Shift)F2 : Color

Figure 12: IDE HDD Auto Detection

Type "Y" will accept the H.D.D. parameter reported by BIOS.

Type "N" will keep the old H.D.D. parameter setup. If the hard disk cylinder number is over 1024, then the user can select LBA mode or LARGER mode for DOS partition larger than 528 MB.

Save & Exit Setup

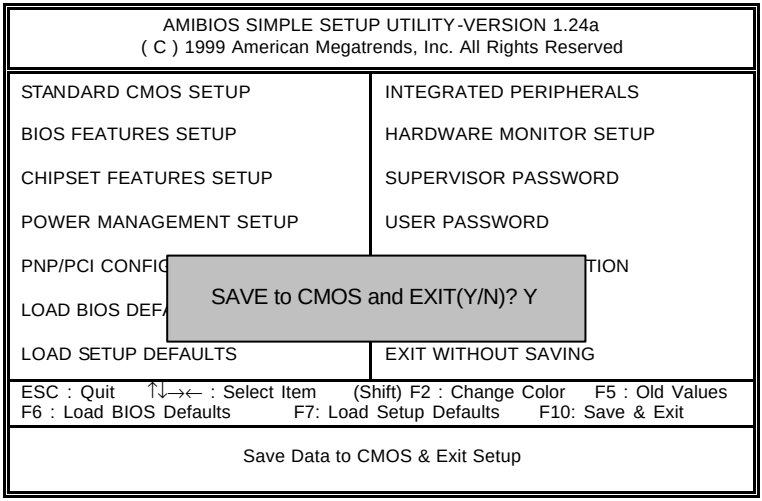

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIG
LOAD BIOS DEFA
LOAD SETUP DEFAULTS
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
TION
SAVE to CMOS and EXIT(Y/N)? Y
EXIT WITHOUT SAVING
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Save Data to CMOS & Exit Setup

Figure 13: Save & Exit Setup

Type "Y" will quit the Setup Utility and save the user setup value to RTC CMOS.

Type "N" will return to Setup Utility.

Exit Without Saving

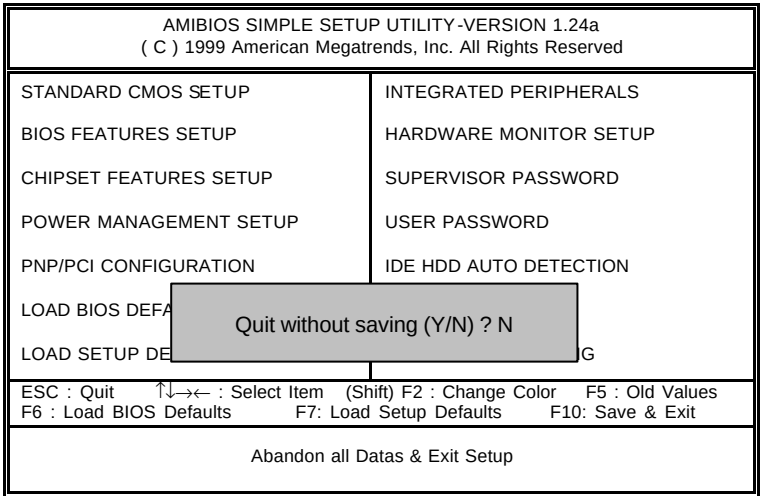

AMIBIOS SIMPLE SETUP UTILITY-VERSION 1.24a
(C) 1999 American Megatrends, Inc. All Rights Reserved
STANDARD CMOS SETUP
BIOS FEATURES SETUP
CHIPSET FEATURES SETUP
POWER MANAGEMENT SETUP
PNP/PCI CONFIGURATION
LOAD BIOS DEFA
LOAD SETUP DE
INTEGRATED PERIPHERALS
HARDWARE MONITOR SETUP
SUPERVISOR PASSWORD
USER PASSWORD
IDE HDD AUTO DETECTION
Quit without saving (Y/N) ? N
ESC : Quit ↑↓→← : Select Item (Shift) F2 : Change Color F5 : Old Values
F6 : Load BIOS Defaults F7: Load Setup Defaults F10: Save & Exit
Abandon all Datas & Exit Setup

Figure 14: Exit Without Saving

Type "Y" will quit the Setup Utility without saving to RTC CMOS.

Type "N" will return to Setup Utility.

Appendix

Appendix : Acronyms

Acor.	Meaning
ACPI	Advanced Configuration and Power Interface
POST	Power-On Self Test
LAN	Local Area Network
ECP	Extended Capabilities Port
APM	Advanced Power Management
DMA	Direct Memory Access
MHz	Megahertz
ESCD	Extended System Configuration Data
CPU	Central Processing Unit
SMP	Symmetric Multi-Processing
USB	Universal Serial Bus
OS	Operating System
ECC	Error Checking and Correcting
IDE	Integrated Dual Channel Enhanced
SCI	Special Circumstance Instructions
LBA	Logical Block Addressing
EMC	Electromagnetic Compatibility
BIOS	Basic Input / Output System
SMI	System Management Interrupt
IRQ	Interrupt Request
NIC	Network Interface Card
A.G.P.	Accelerated Graphics Port
S.E.C.C.	Single Edge Contact Cartridge
LED	Light Emitting Diode
EPP	Enhanced Parallel Port
CMOS	Complementary Metal Oxide Semiconductor
I/O	Input / Output
ESD	Electrostatic Discharge
OEM	Original Equipment Manufacturer
SRAM	Static Random Access Memory
VID	Voltage ID
DMI	Desktop Management Interface
MIDI	Musical Interface Digital Interface
IOAPIC	Input Output Advanced Programmable Input Controller
DIMM	Dual Inline Memory Module
DRAM	Dynamic Random Access Memory
PAC	PCI A.G.P. Controller
AMR	Audio Modem Riser

Acor.	Meaning
PCI	Peripheral Component Interconnect
RIMM	Rambus in-line Memory Module
DRM	Dual Retention Mechanism
ISA	Industry Standard Architecture
MTH	Memory Translator Hub
CRIMM	Continuity RIMM